



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/740,036	12/18/2003	Yoshiya Hirase	883.0005.U1(US)	2501
29683 7590 10/10/2007 HARRINGTON & SMITH, PC 4 RESEARCH DRIVE SHELTON, CT 06484-6212			EXAMINER ZHE, MENG YAO	
			ART UNIT 2195	PAPER NUMBER
			MAIL DATE 10/10/2007	DELIVERY MODE PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

D

Office Action Summary	Application No. 10/740,036	Applicant(s) HIRASE, YOSHIYA	
	Examiner MengYao Zhe	Art Unit 2195	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 18 December 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-17 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-17 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 08 April 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. Claims 1-17 are presented for examination.

Double Patenting

2. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be

Art Unit: 2195

commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

3. Claims 1-17 are rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-17 of U.S. Patent Application No. 10740034. The conflicting claims are exactly identical.

Claim Rejections - 35 USC § 112

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

5. Claims 1-17 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

A. The following claim languages are unclear and indefinite:

i) Claim 1, line 3, it is unclear what "a Dynamic Configurable Hardware Logic layer" is <i.e. how is it different from any device or hardwares that are attached to a computer?>.

lines 5-6, it is unclear what a "TiEred Multi-midia Acceleration Scheduler" is <i.e. how is it different from any other schedulers?>.

Claims 7 and 13 have the same deficiencies as claim 1 above.

ii) Claim 2, it is unclear what a "Tier-1 scheduler" and a "Tier-2 scheduler" are and how they are different from each other <i.e. what are their functions? How are they distinguished from other schedulers and each other?>.

Claims 8 and 14 have the same deficiencies as claim 2 above.

iii) Claim 4, it is uncertain as to what is meant by "one context plane" <i.e. what defines a context plane?>.

Claims 10 and 16 have the same deficiencies as claim 4 above.

Claim Rejections - 35 USC § 102

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

Art Unit: 2195

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

7. Claims 1 and 7 are rejected under 35 U.S.C. 102(e) as being anticipated by Karam et al., Patent No. 7,111,089 (hereafter Karam).

8. As per claims 1 and 7, Karam teaches a device architecture for running applications, comprising:

an operating system (OS) comprising an OS scheduler (Fig 1, units 22 and 31);

a Dynamic Configurable Hardware Logic (DCHL) layer comprised of a plurality of Logic Elements (LEs) (Fig 1, units 20 and 21);

and interposed between said OS and said DCHL layer, a TiEred Multi-media Acceleration Scheduler (TEMAS) that cooperates with the OS scheduler for scheduling and configuring the LEs of the DCHL to execute applications (Fig 1, unit 30; Column 2, lines 49-63).

Claim Rejections - 35 USC § 103

9. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

10. Claims 1-17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hoskins, Patent No. 6,789,132 in view of Kaihlaniemi, Patent No. 6,370,591 (hereafter Kaihlaniemi).

11. As per claims 1 and 7, Hoskins teaches a device architecture for running applications, comprising:

a Dynamic Configurable Hardware Logic (DCHL) layer comprised of a plurality of Logic Elements (LEs) (Fig 2, unit 110 and all of unit 202 except unit 222);

and interposed between a host computer (Fig 2, unit 200) and said DCHL layer, a TiEred Multi-media Acceleration Scheduler (TEMAS) (Fig 2, unit 222) that cooperates with the host computer for scheduling and configuring the LEs of the DCHL to execute applications (Column 5, lines 35-39; Column 6, lines 1-10, lines 41-47).

12. Hoskins does not specifically teach that the host computer has an operating system comprising an OS scheduler that the TEMAS cooperates with.

However, Kaihlaniemi teaches personal computers running operating systems that are able to communicate with external devices (Column 1, lines 11-33) for the purpose of controlling devices using operating systems. It would have been obvious to

one having ordinary skill in the art at the time of the applicant's invention to have combined the teachings of Hoskins with the host computer has an operating system comprising an OS scheduler that the TEMAS cooperates with, as taught by Kaihlaniemi, because it allows for the operating system to control devices.

13. As per claims 2, 8, 14, Hoskins teaches where the TEMAS is comprised of a Tier-1 scheduler that communicates with the OS scheduler and at least one Tier-2 scheduler (Fig 3, units 303, 305, and 307) interposed between the Tier-1 scheduler and one DCHL configurable device (Column 6, lines 50-57; Column 8, lines 39-44).

14. As per claims 3, 9, 15, Hoskins teaches where the TEMAS operates in response to configuration requests to configure and reconfigure at least some of the plurality of LEs in accordance with at least one algorithm logic (Column 7, line 1-9; Column 8, lines 39-64; Column 9, lines 10-21).

15. As per claims 4, 10, 16, Hoskins teaches where said plurality of LEs are disposed within at least one context plane (Fig 2, unit 110 and all of unit 202 except unit 222).

Art Unit: 2195

16. As per claims 5, 11, Hoskins teaches an application layer that comprises at least one application (Column 20, lines 34-37), a service layer that comprises said Tier-1 scheduler (Fig 2, unit 222), a node layer that comprises said at least one Tier-2 scheduler that is coupled to a scheduling algorithm of said Tier-1 scheduler (Fig 3, units 303, 305, 307), and a hardware layer that comprises said at least one DCHL configurable device (unit 110 and unit 212).

Kaihlanieni teaches an operating system with scheduler (Column 1, lines 12-28)

17. As per claim 6, 12, Kaihlaniemi teaches where said device comprises a device having wireless communications capability (Column 1, lines 48-50).

18. As per claim 13, Hoskins teaches an applications layer comprising a plurality of applications (Column 20, lines 34-37); a hardware layer comprising Dynamic Configurable Hardware Logic (DCHL) comprised of a plurality of Logic Elements (LEs) (unit 110 and unit 212); and interposed between host computer and said DCHL in said service layer and in a node layer, a TiEred Multi-media Acceleration Scheduler (TEMAS) that cooperates with the host computer for scheduling and configuring the LEs of the DCHL to execute said applications (Column 5, lines 35-39; Column 6, lines 1-10, lines 41-47).

Kaihlaniemi teaches personal computers running operating systems that are able to communicate with external devices (Column 1, lines 11-33) and a wireless communication device (Column 1, lines 48-50).

19. As per claim 17, Kaihlaniemi teaches where said device comprises a cellular telephone (Column 1, lines 48-50).


Conclusion

20. Any inquiry concerning this communication or earlier communications from the examiner should be directed to MengYao Zhe whose telephone number is 571-272-6946. The examiner can normally be reached on Monday Through Friday, 7:30 - 5:00 EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Meng-Ai An can be reached at 571-272-3756. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 2195

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



MENG-AL T. AN
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2195